DEFENSE NUCLEAR FACILITIES SAFETY BOARD

December 3, 2004

MEMORANDUM FOR: J. Kent Fortenberry, Technical Director
FROM: T. D. Burns Jr. and C. H. Keilers, Jr.
SUBJECT: Los Alamos Report for Week Ending December 3, 2004

Hadjian and Jones were here this week observing LANL preparations to update the LANL-wide probabilistic seismic hazard analysis.

Plutonium Facility (TA-55): NNSA and LANL need to aggressively renew their efforts to address the findings from the Pu-238 Type B investigation of nearly a year ago (site rep weekly 12/19/03). This effort has stalled during the stand-down and is just now resuming. Some areas needing attention are: developing comprehensive requirements for safe stabilization, storage, and disposition of Pu-238 materials; completing the LANL comprehensive nuclear materials packaging and storage plan; and completing the preliminary LANL-wide inventory assessment of radioactive material outside an approved containment boundary. Regarding the Pu-238 contaminated room, LANL is preparing procedures to over-pack residues and complete the cleanup; however, starting up additional pyrolysis capability and disposing of stabilized residues may be delayed for up to a year, depending on how NNSA and LANL perceive the relative risks (e.g., seismic and building leak path issues vs extended storage of Pu-238 contaminated cheese-cloth and other residues in drums and glove-boxes in PF-4).

Critical Experiments Facility (TA-18): On Thursday, the LANL members of the Resumption Review Board (RRB) approved a division-level recommendation to restart TA-18 subject to completion and line management validation of all corrective actions for pre-start findings. The LASO member of the RRB withheld his concurrence with this approval recommendation. Though generally satisfied with the resumption plan, he indicated that he would withhold concurrence until (a) LASO has independently verified that the proposed corrective actions are both completed and effective, and (b) LANL has submitted and LASO has accepted a resource-loaded plan outlining proposed future TA-18 activities. Regarding those activities, the potential accident consequences of two of the five proposed critical experiments for FY05 have not been analyzed and may result in the need for Safety Class controls. An expedited effort to evaluate the potential accident consequences of the proposed critical experiments and demonstrate the adequacy of the associated controls is warranted and will be necessary to address the concerns raised in the Board's May 21, 2004 letter.

Emergency Exercise: On Wednesday starting at 6:45 AM, NNSA conducted a no-notice exercise that activated the LANL Emergency Operations Center (EOC). The scenario involved a transportation accident with injuries and a chemically reactive, toxic plume release. The NNSA team tentatively concluded that incident command, and event categorization and classification were properly executed; however, most other areas need work, including EOC communications, consequence evaluation, protective action confirmation, and HAZMAT response time. Many issues seen were already known from post-Cerro Grande fire reviews or other recent exercises, but they remain unresolved.

Tritium Operations: NNSA appears to have decided to transfer the neutron tube target loading (NTTL) mission from LANL to Sandia. The LANL Weapons Engineering Tritium Facility (WETF) has been preparing to receive the mission for years and is nearly ready. NTTL operations are currently performed in the TA-21 Tritium Science & Fabrication Facility (TSFF)– a 40 year old facility with legacy contamination from previous missions and an ill-defined safety basis. The transfer decision may extend operations in TSFF by more than a year. The path forward may warrant re-consideration due to the risks associated with continuing to run TSFF and the NTTL investment already made in WETF..